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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/666,407	09/19/2003	Aidan Michael Williams	CML01101AC	7455

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EXAMINER
NGUYEN, THUONG

ART UNIT	PAPER NUMBER
2155	

DATE MAILED: 12/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 September 2003*.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 January 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *9/19/03*.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

1.   This action is in response to application 10/666,407 filed 9/19/03. Claims 1-20

are pending and represent method and apparatus for method and apparatus for

connecting privately addressed networks.

Claim Rejections - 35 USC § 102

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3.   Claims 1, 4-13, 15-20 are rejected under 35 U.S.C. 102(e) as being anticipated

by Nguyen, Patent No. 2002/0016926 A1. Nguyen teaches the invention as claimed

including method and apparatus for integrating tunneling protocols with standard routing

protocols (see abstract).

4.   As to claim 1, Nguyen teaches a method comprising:

automatically assigning respective unique addresses from said reserved address

space to each of said at least two privately addressed networks (page 6, paragraph 92;

Nguyen discloses that the method of assigned the IP address to the hidden IP address,

virtual IP, such as private address from the public IP address that visible to nodes); and

automatically routing communications between said at least two privately

addressed networks dependent on said unique addresses via a virtual network link

(figure 9; Nguyen discloses that the method of routing communication between nodes,

network and the virtual network link).

5.   As to claim 4, Nguyen teaches the method as recited in claim 1, wherein said

public network comprises the Internet and said unique addresses comprise unique

Internet Protocol (IP) subnet prefixes assigned to each of said at least two privately

addressed networks (page 6, paragraph 94; Nguyen discloses that the method of

assigned the virtual IP address in the IP address field and the public IP address is

encoded as the MAC address figure).

6.   As to claim 5, Nguyen teaches the method as recited in claim 1, comprising

automatically creating said virtual network link between said at least two privately

addressed networks (page 5, paragraph 80; Nguyen discloses that the method of

created a virtual private network between at least two nodes such as private

addresses).

7.   As to claim 6, Nguyen teaches the method as recited in claim 5, wherein said

unique addresses are assigned prior to creating said virtual network link (figure 7;

Nguyen discloses that the method of created the unique address and then create the

virtual link).

8.   As to claim 7, Nguyen teaches the method as recited in claim 5, wherein said

virtual network link comprises a tunnel through the Internet (page 7, paragraph 107;

Nguyen discloses that the method of using the tunnel).

9.   As to claim 8, Nguyen teaches the method as recited in claim 5, comprises:

        automatically comparing the addresses of said at least two privately addressed

networks, said addresses further comprising addresses of any other privately addressed

networks connected by existing virtual network links to said at least two privately

addressed networks (page 7, paragraph 103; Nguyen discloses that the method of

updated the tunnel configuration database; Nguyen also discloses the method of

compared the tunnel link and ignored if it was already encountered); and

        automatically creating said virtual network link between said at least two privately

addressed networks if no address conflict is detected in said comparing step (page 6,

paragraph 97; Nguyen discloses that the method of reconfigured the tunnel when the

router becomes available).

10.   As to claim 9, Nguyen teaches the method as recited in claim 8, comprising:

        automatically assigning a different address to one of said at least two privately

addressed networks if an address conflict is detected in said comparing step (page 6,

paragraph 102; Nguyen discloses that the method of automatic reconfigured tunnels if

the private networks has been fails or disable); and

        automatically creating said virtual network link between said at least two privately

addressed networks if no address conflict is detected between said different address

and the addresses of the other of said at least two privately addressed networks, and no

address conflict is detected between said different address and the addresses of any

other privately addressed networks connected by existing virtual network links to the

other of said at least two privately addressed networks (page 6, paragraph 97; Nguyen

discloses that the method of reconfigured the tunnel when the router becomes

available).

11.   As to claim 10, Nguyen teaches a method comprising:

automatically creating at least one virtual network link between said privately

addressed networks for routing communications (page 5, paragraph 80; Nguyen

discloses that the method of created a virtual private network between at least two

nodes such as private addresses);

automatically assigning respective unique addresses from a reserved address

space common to said privately addressed networks to devices connected to said

privately addressed networks (page 6, paragraph 92; Nguyen discloses that the method

of assigned the IP address to the hidden IP address, virtual IP, such as private address

from the public IP address that visible to nodes); and

automatically routing communications between said privately addressed

networks dependent on said unique addresses via said at least one virtual network link

(figure 9; Nguyen discloses that the method of routing communication between nodes,

network and the virtual network link).

12.   As to claim 11, Nguyen teaches the method as recited in claim 9, comprising

automatically collaborating between said privately addressed networks to detect

addresses already assigned (page 6, paragraph 93; Nguyen discloses that the method

of using the registration channel to manage the gateway device when the new address

is assigned).

13.   As to claim 12, Nguyen teaches an apparatus comprising:

at least one communications interface for transmitting and receiving data (figure

6; Nguyen discloses that the apparatus of setup the communication links between the

networks for transmitting and receiving packets or data);

a storage unit for storing data and instructions to be performed by a processing

unit (figure 8A & 8B); and

automatically assign respective unique addresses from said reserved address

space to each of said at least two privately addressed networks (page 6, paragraph 92;

Nguyen discloses that the method of assigned the IP address to the hidden IP address,

virtual IP, such as private address from the public IP address that visible to nodes); and

automatically route communications between said at least two privately

addressed networks dependent on said unique addresses via a virtual network link

(figure 9; Nguyen discloses that the method of routing communication between nodes,

network and the virtual network link).

14.   As to claim 13, Nguyen teaches the apparatus as recited in claim 12, wherein

said public network comprises the Internet and said processing unit is programmed to

automatically assign unique Internet Protocol (IP) subnet prefixes to each of said

privately addressed networks (page 6, paragraph 94; Nguyen discloses that the

apparatus of assigned the virtual IP address in the IP address field and the public IP

address is encoded as the MAC address figure).

15.   As to claim 15, Nguyen teaches the apparatus as recited in claim 12, wherein

said processing unit is further programmed to automatically create said virtual network

link between said at least two privately addressed networks (page 5, paragraph 80;

Nguyen discloses that the apparatus of created a virtual private network between at least two nodes such as private addresses).

16.   As to claim 16, Nguyen teaches the apparatus as recited in claim 15, wherein said virtual network link comprises a tunnel through the Internet (page 7, paragraph 107; Nguyen discloses that the apparatus of using the tunnel).

17.   As to claim 17, Nguyen teaches the apparatus as recited in claim 15, wherein said processing unit is programmed to:

automatically compare the addresses of said at least two privately addressed networks, each of said addresses further comprising addresses of any other privately addressed networks connected by existing virtual network links to said at least two privately addressed networks (page 7, paragraph 103; Nguyen discloses that the apparatus of updated the tunnel configuration database; Nguyen also discloses the apparatus of compared the tunnel link and ignored if it was already encountered); and

automatically create said virtual network link between said at least two privately addressed networks if no address conflict was detected when said addresses were compared (page 6, paragraph 97; Nguyen discloses that the apparatus of reconfigured the tunnel when the router becomes available).

18.   As to claim 18, Nguyen teaches the apparatus as recited in claim 17, wherein said processing unit is programmed to:

automatically assign a different address to one of said at least two privately addressed networks if an address conflict was detected when said addresses were

compared (page 6, paragraph 102; Nguyen discloses that the apparatus of automatic

reconfigured tunnels if the private networks has been fails or disable); and

automatically create said virtual network link between said at least two privately

addressed networks if no address conflict is detected between said different address

and the addresses of the other of said at least two privately addressed networks, and no

address conflict is detected between said different address and the addresses of any

other privately addressed networks connected by existing virtual network links to the

other of said at least two privately addressed networks (page 6, paragraph 97; Nguyen

discloses that the apparatus of reconfigured the tunnel when the router becomes

available).

19.   As to claim 19, Nguyen teaches the apparatus as recited in claim 12, wherein

said apparatus comprises a network gateway device (page 6, paragraph 98; Nguyen

discloses that the apparatus of using the secure gateway for the plurality nodes).

20.   As to claim 20, Nguyen teaches the apparatus as recited in claim 19, further

comprising a Dynamic Host Configuration Protocol (DHCP) server (page 6, paragraph

99; Nguyen discloses that the apparatus of using DHCP sever to assigned the IP

address for the private networks).

Claim Rejections - 35 USC § 103

21.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

22.   Claims 2 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Nguyen, Patent No. 2002/0016926 A1 in view of Johnson, Patent No. 2003/0172170.

Nguyen teaches the invention substantially as claimed including method and

apparatus for integrating tunneling protocols with standard routing protocols (see

abstract).

However, Johnson teaches providing multiple ISP access to devices behind NAT

(see abstract).

As to claim 2, Nguyen teaches the method as recited in claim 1. Nguyen fails to

teach the limitation wherein said communications are automatically routed without

network address translation at a gateway of either of said at least two privately

addressed networks.

However, Johnson teaches the limitation wherein said communications are

automatically routed without network address translation at a gateway of either of said

at least two privately addressed networks (page 1, paragraph 9; Johnson discloses that

the method to enable access to the network without using the network address

translation).

It would have been obvious to one of ordinary skill in the art at the time of the

invention to modify Nguyen in view of Johnson so that the system would perform faster.

One would be motivated to do so to reduce the burdens of using multiple NAT.

23.   As to claim 14, Nguyen teaches the apparatus as recited in claim 11. Nguyen

fails to teach the limitation wherein said processing unit is programmed to automatically

route said communications without network address translation at a gateway of either of said two privately addressed networks.

However, Johnson teaches the limitation wherein said processing unit is programmed to automatically route said communications without network address translation at a gateway of either of said two privately addressed networks (page 1, paragraph 9; Johnson discloses that the apparatus to enable access to the network without using the network address translation).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Nguyen in view of Johnson so that the system would perform faster. One would be motivated to do so to reduce the burdens of using multiple NAT.

24.   Claims 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nguyen, Patent No. 2002/0016926 A1 in view of Young, Patent No. 2003/0093563 A1.

Nguyen teaches the invention substantially as claimed including method and apparatus for integrating tunneling protocols with standard routing protocols (see abstract).

However, Young teaches method and system for implementing and managing a multimedia access network device (see abstract).

As to claim 3, Nguyen teaches the method as recited in claim 1. Nguyen fails to teach the limitation wherein said unique addresses are automatically assigned and said communications are automatically routed without human intervention.

However, Young teaches the limitation wherein said unique addresses are automatically assigned and said communications are automatically routed without human intervention (page 7, paragraph 106; Young discloses that the method of initiate the configuration without customer intervention).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Nguyen in view of Young so that the system would gather the necessary information instantly, without waiting to be direct. One would be motivated to do so to fasten the communication between of the private networks.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thuong T. Nguyen whose telephone number is 571-272-3864. The examiner can normally be reached on 7:30AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Saleh Najjar can be reached on 571-272-4006. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

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For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Thuong T Nguyen
Patent Examiner/Art Unit 2155
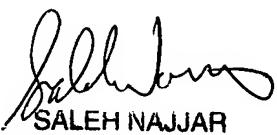
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